

Please amend page 24, line 1 as follows:

Claims What is claimed is:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1) (Currently amended) A method of assessing cardiac neurotransmission in a human subject comprising:
 - i) ~~vi)~~ administration to said subject of an amount suitable for *in vivo* imaging of an adrenergic imaging agent;
 - ii) ~~vii)~~ *in vivo* imaging of said subject using said adrenergic imaging agent;
 - iii) ~~viii)~~ administration of an adrenergic interfering agent to said subject;
 - iv) ~~ix)~~ repeating steps (i) and (ii); and,
 - v) ~~x)~~ comparing the images obtained in steps (ii) and (iv).
- 2) (Original) The method of claim 1 wherein said cardiac neurotransmission is assessed to investigate the status of a cardioneuropathy in said human subject.
- 3) (Original) The method of claim 2 wherein said cardioneuropathy is a primary cardioneuropathy related to:
 - (i) a dysautonomia;
 - (ii) heart transplantation; or,
 - (iii) idiopathic ventricular tachycardia and fibrillation.

4) (Original) The method of claim 2 wherein said cardioneuropathy is a secondary cardioneuropathy related to:

- (i) dilated cardiomyopathy;
- (ii) coronary artery disease;
- (iii) hypertrophic cardiomyopathy;
- (iv) arrhythmogenic right ventricular cardiomyopathy;
- (v) diabetes mellitus;
- (vi) hypertension; or,
- (vii) drug-induced cardiotoxicity.

5) (Original) The method of claim 1 wherein said adrenergic interfering agent is selected from:

- (i) tricyclic antidepressants;
- (ii) beta blockers;
- (iii) calcium channel blockers;
- (iv) sympathomimetic agents; and,
- (v) cocaine.

6) (Original) The method of claim 5 wherein said adrenergic interfering agent is a tricyclic antidepressant selected from desipramine, amitryptiline and imipramine.

7) (Original) The method of claim 6 wherein said adrenergic interfering agent is amitryptiline.

- 8) (Original) The method of claim 1 wherein said adrenergic imaging agent is selected from labelled forms of *m*IBG, *m*FBG, hydroxyephedrine, ephedrine, fluorodopamine, CGP, carazolol and MQNB.
- 9) (Original) The method of claim 8 wherein said adrenergic imaging agent is radioiodinated *m*IBG.
- 10) (Original) The method of claim 9 wherein said adrenergic imaging agent is ¹²³I *m*IBG.
- 11) (Original) The method of claim 1 wherein said *in vivo* imaging is external imaging carried out by SPECT or PET.
- 12) (Original) The method of claim 11 wherein said external imaging is carried out by SPECT.
- 13) (Original) A method of assessing cardiac neurotransmission in a human subject comprising:
- i) administration of a non-therapeutic dose of an adrenergic interfering agent to said subject;
 - ii) administration to said subject of an amount suitable for *in vivo* imaging of an adrenergic imaging agent; and,
 - iii) *in vivo* imaging of said subject.
- 14) (Original) The method of claim 13 wherein said cardiac neurotransmission is assessed to investigate the status of a cardioneuropathy in said human subject.
- 15) (Original) The method of claim 14 wherein said cardioneuropathy is a primary cardioneuropathy related to:
- (i) a dysautonomia;
 - (ii) heart transplantation; or,

(iii) idiopathic ventricular tachycardia and fibrillation.

16) (Original) The method of claim 14 wherein said cardioneuropathy is a secondary cardioneuropathy related to:

- (i) dilated cardiomyopathy;
- (ii) coronary artery disease;
- (iii) hypertrophic cardiomyopathy;
- (iv) arrhythmogenic right ventricular cardiomyopathy;
- (v) diabetes mellitus;
- (vi) hypertension; or,
- (vii) drug-induced cardiotoxicity.

17) (Original) The method of claim 13 wherein said adrenergic interfering agent is selected from:

- (i) tricyclic antidepressants;
- (ii) beta blockers;
- (iii) calcium channel blockers;
- (iv) sympathomimetic agents; and,
- (v) cocaine.

18) (Original) The method of claim 17 wherein said adrenergic interfering agent is a tricyclic antidepressant selected from desipramine, amitriptyline and imipramine.

19) (Original) The method of claim 18 wherein said adrenergic interfering agent is amitriptyline and the non-therapeutic dose is between 10 and 50mg.

- 20) (Original) The method of claim 13 wherein said adrenergic imaging agent is selected from labelled forms of *m*IBG, *m*FBG, hydroxyephedrine, ephedrine, fluorodopamine, CGP, carazolol and MQNB.
- 21) (Original) The method of claim 20 wherein said adrenergic imaging agent is radioiodinated *m*IBG.
- 22) (Original) The method of claim 21 wherein said adrenergic imaging agent is ¹²³I *m*IBG.
- 23) (Original) The method of claim 13 wherein said *in vivo* imaging is external imaging carried out by SPECT or PET.
- 24) (Original) The method of claim 23 wherein said external imaging is carried out by SPECT.
- 25)– 37) Cancel
- 38) (Original) A method of imaging the sympathetic innervation of a tissue of a human subject comprising:
- (i) *in vivo* imaging with an adrenergic imaging agent;
 - (ii) administration of an adrenergic interfering agent;
 - (iii) repeating step (i); and,
 - (iv) comparing the images obtained in steps (i) and (iii).
- 39) (Original) The method of claim 38 wherein said tissue is the myocardium.
- 40) (Original) The method of claim 38 wherein said sympathetic innervation is imaged to investigate the status of a cardioneuropathy in said human subject.
- 41) (Original) The method of claim 40 wherein said cardioneuropathy is a primary cardioneuropathy related to:

- (i) a dysautonomia;
- (ii) heart transplantation; or,
- (iii) idiopathic ventricular tachycardia and fibrillation.

42) (Original) The method of claim 40 wherein said cardioneuropathy is a secondary cardioneuropathy related to:

- (i) dilated cardiomyopathy;
- (ii) coronary artery disease;
- (iii) hypertrophic cardiomyopathy;
- (iv) arrhythmogenic right ventricular cardiomyopathy;
- (v) diabetes mellitus;
- (vi) hypertension; or,
- (vii) drug-induced cardiotoxicity.

43) (Original) The method of claim 38 wherein said adrenergic interfering agent is selected from:

- (i) tricyclic antidepressants;
- (ii) beta blockers;
- (iii) calcium channel blockers;
- (iv) sympathomimetic agents; and,
- (v) cocaine.

44) (Original) The method of claim 43 wherein said adrenergic interfering agent is a tricyclic antidepressant selected from desipramine, amitryptiline and imipramine.

45) (Original) The method of claim 44 wherein said adrenergic interfering agent is amitryptiline.

46) (Original) The method of claim 45 wherein said adrenergic imaging agent is selected from labelled forms of *m*IBG, *m*FBG, hydroxyephedrine, ephedrine, fluorodopamine, CGP, carazolol and MQNB.

47) (Original) The method of claim 38 wherein said adrenergic imaging agent is radioiodinated *m*IBG.

48) (Original) The method of claim 47 wherein said adrenergic imaging agent is ¹²³I *m*IBG.

49) (Original) The method of claim 38 wherein said *in vivo* imaging is external imaging carried out by SPECT or PET.

50) (Original) The method of claim 49 wherein said external imaging is carried out by SPECT.

51)– 72) Cancel.

73) (Original) A kit for use in the method of claim 1 which comprises:

- (i) an adrenergic interfering agent; and,
- (ii) an adrenergic imaging agent in a form suitable for carrying out said *in vivo* imaging steps, or a precursor thereof.

74.) (Original) The kit of claim 73 wherein said adrenergic interfering agent is selected from:

- (i) tricyclic antidepressants;

- (ii) beta blockers;
- (iii) calcium channel blockers;
- (iv) sympathomimetic agents; and,
- (v) cocaine.

75) (Original) The kit of claim 74 wherein said adrenergic interfering agent is a tricyclic antidepressant selected from desipramine, amitryptiline and imipramine.

76) (Original) The kit of claim 75 wherein said adrenergic interfering agent is amitryptiline.

77) (Original) The kit of claim 73 wherein said adrenergic imaging agent is selected from labelled forms of *m*IBG, *m*FBG, hydroxyephedrine, ephedrine, fluorodopamine, CGP, carazolol and MQNB.

78) (Original) The kit of claim 77 wherein said adrenergic imaging agent is radioiodinated *m*IBG.

79) (Original) The kit of claim 78 wherein said adrenergic imaging agent is ¹²³I *m*IBG.